

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002352**Date Inspected:** 25-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Fu Yu Hong**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the fabrication scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

The QA inspector witnessed ZPMC weld repairs at the junction of the U-ribs to the deck panels DP-017-002.

ZPMC was following the weld repair procedure for close ribs welds approved on the submittal ABF634 R01, letter 05.03.01-001773.

On this date the QA inspector observed that ZPMC was performing grinding operations with the 2.5 mm grinder wheel over a 0.5 sheet metal plate to avoid the removal of the base metal on the deck plate. The QA inspector had a conversation with the Task Leader Albert Carreon and Structures Material Representative Ady Velasco. The QA inspector informed the following observation:

1. ZPMC was not removing completely the weld overlap; a notch at the bottom toe was remaining after grinding operations. The QA inspector inspected with the straight rule using a light leakage technique and did not observe light leakage at the location inspected. However the QA inspector performed magnetic particle testing (MT) and observed questionable test (magnetic flux leakage) results from the notch condition from the remaining corner at the toe of the weld from the weld overlap.

2. ZPMC excavated the areas marked with lack of fusion and weld under fill with a 2.5 mm thick grinder wheel. The QA inspector observed that the groove preparation was not detailed on the repair procedure and because the tight groove profile was questionable if the welder could achieve that the width of the face of the weld could exceed the depth or width of the pass according to AWD 1.5 2002 Section 4.7.7. In addition the repairs were not being performed as detailed on the ZPMC's repair procedure. ZPMC's grinding operations on the lack fusion were

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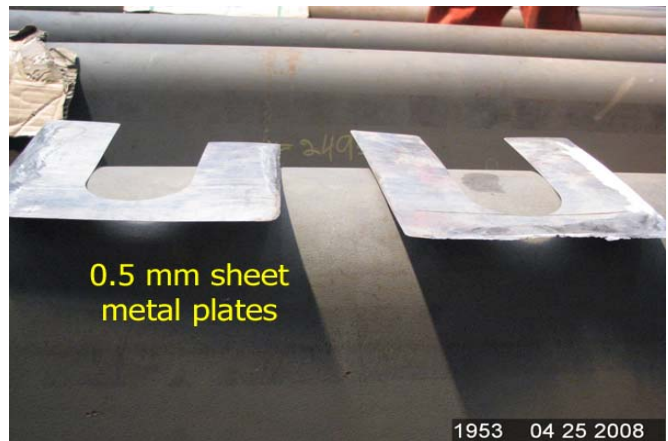
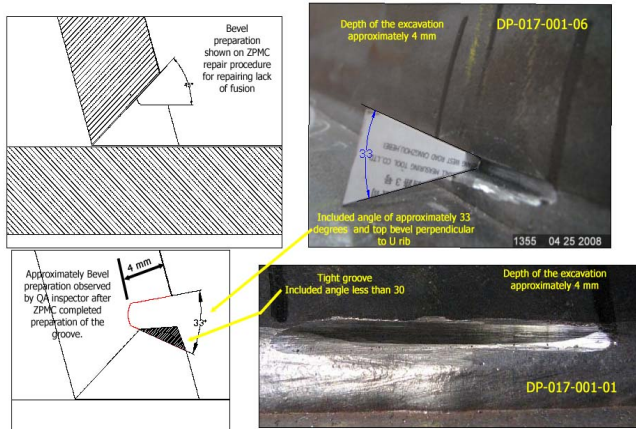
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performed approximately perpendicular to the rib and not following the fusion line of the weld.

3. The QA inspector had a conversation with ZPMC QC inspector Li Jie and ABF representative Ding Baihua. ABF and ZPMC representatives informed to the QA inspector that grinding was completed on the excavated areas and that ZPMC would perform MT to the excavated areas for lack of fusion.

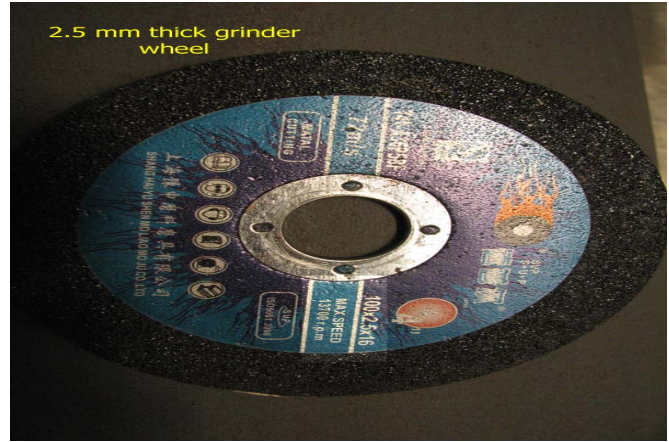
ZPMC did not perform any welding (weld repairs) on this shift. The MT examination was still pending on the lack of fusion areas where ZPMC performed grinding operations.

The photograph below shows ZPMC activities



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Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Acuna,Alfredo

Quality Assurance Inspector

Reviewed By: Cuellar,Robert

QA Reviewer